CLAIMS

What is claimed is:

1. A parameter estimator comprising:

correlation logic for determining, using a dynamically variable integration time, a correlation function representing the correlation between a signal and one or more shifted versions of an identification code; and

analysis logic for analyzing the correlation function and estimating, responsive thereto, one or more parameter(s) relating to the signal.

2. The parameter estimator of claim 1 configured to first attempt to estimate the one or more parameter(s) from a correlation function derived using a first integration time, and, if unsuccessful, estimate the one or more parameter(s) from a correlation function derived using a second integration time which may differ from the first.

3. The parameter estimator of claim 2 wherein the second integration time is of shorter duration than the first.

4. The parameter estimator of claim 2 wherein the second integration time is of longer duration than the first.

5. The parameter estimator of claim 1 configured to determine an integration time from an analysis of a correlation function derived from the signal using a default integration time.

6. The parameter estimator of claim 1 configured to estimate one or more parameter(s) relating to a first signal from a correlation function derived from the first

signal using a first integration time, and to estimate one or more parameter(s) relating to a second signal from a correlation function derived from the second signal using a second integration time which may differ from the first.

7. A parameter estimator comprising:

correlation means for determining, using a dynamically variable integration time, a correlation function representing the correlation between a signal and one or more shifted versions of an identification code; and

analysis means for analyzing the correlation function and estimating, responsive thereto, one or more parameter(s) relating to the signal.

8. A method of estimating one or more parameter(s) of a signal using a dynamically variable integration time comprising:

determining, using a first integration time, a first correlation function representing the correlation between a first signal and one or more shifted versions of a first identification code;

estimating, responsive to the first correlation function, one or more parameter(s) relating to the first signal;

determining, using a second integration time which may differ from the first integration time, a second correlation function representing the correlation between a second signal and one or more shifted versions of a second identification code; and

estimating, responsive to the second correlation function, one or more parameter(s) relating to the second signal.

9. The method of claim 8 wherein the first and second signals are pilot signals.

10. The method of claim 8 wherein the first and second identification codes are PN codes.

11. The method of claim 8 wherein the second integration time is of shorter duration than the first integration time.

12. The method of claim 8 wherein the second integration time is of longer duration that the first integration time.

13. The method of claim 8 wherein the one or more parameter(s) relating to either signal include a time of arrival (TOA) parameter.

14. The method of claim 13 wherein the one or more parameter(s) for either signal include a root mean squared error (RMSE) for the TOA parameter.

15. The method of claim 8 wherein the one or more parameter(s) for either signal include an E_c/I_0 parameter.

16. A method of estimating one or more parameter(s) of a signal using a dynamically variable integration time comprising:

determining, using a first integration time, a first correlation function representing the correlation between a signal and one or more shifted versions of an identification code;

attempting to estimate, responsive to the first correlation function, one or more parameter(s) relating to the signal; and

if the attempt is unsuccessful:

determining, using a second integration time which may differ from the first integration time, a second correlation function representing the correlation between the signal and one or more shifted versions of the identification code; and

attempting to estimate, responsive to the second correlation function, the one or more parameter(s) relating to the signal.

17. The method of claim 16 wherein the signal is a pilot signal.

18. The method of claim 16 wherein the identification code is a PN code.

19. The method of claim 16 wherein the second integration time is of shorter duration than the first integration time.

20. The method of claim 16 wherein the second integration time is of longer duration than the first integration time.

21. The method of claim 16 wherein the one or more parameter(s) include a time of arrival (TOA) parameter for the signal.

22. The method of claim 21 wherein the one or more parameter(s) include a root mean squared error (RMSE) for the TOA parameter.

23. The method of claim 16 wherein the one or more parameter(s) include an E_C/I_0 parameter relating to the signal.

24. The method of claim16 further comprising iterating until the one or more parameter(s) are estimated, or it is determined that the one or more parameter(s) cannot be estimated from the signal.

25. A method of estimating one or more parameter(s) relating to signal using a dynamically variable integration time comprising:

determining, using a first integration time, a first correlation function representing the correlation between a signal and an identification code;

determining, responsive to the first correlation function, a second integration time which may differ from the first integration time;

determining, using the second integration time, a second correlation function representing the correlation between the signal and the identification code; and

attempting to estimate, responsive to the second correlation function, one or more parameter(s) relating to the signal.

26. The method of claim 25 wherein the signal is a pilot signal.

27. The method of claim 25 wherein the identification code is a PN code.

28. The method of claim 25 wherein the second integration time is of shorter duration than the first.

29. The method of claim 25 wherein the second integration time is of longer duration than the first.

30. The method of claim 25 wherein the one or more parameter(s) include a time of arrival (TOA) parameter.

31. The method of claim 30 wherein the one or more parameter(s) include root mean squared error (RMSE) for the TOA parameter.

32. The method of claim 25 wherein the one or more parameter(s) include an E_c/I_0 parameter.

33. The method of claim 25 further comprising iterating until the one or more parameter(s) are estimated, or it is determined that the one or more parameter(s) cannot be estimated from the signal.

34. A method of estimating one or more parameter(s) of a signal using a dynamically variable integration time comprising:

a step for determining, using a first integration time, a first correlation function representing the correlation between a first signal and one or more shifted versions of a first identification code;

a step for estimating, responsive to the first correlation function, one or more parameter(s) relating to the first signal;

a step for determining, using a second integration time which may differ from the first integration time, a second correlation function representing the correlation between a second signal and one or more shifted versions of a second identification code; and

a step for estimating, responsive to the second correlation function, one or more parameter(s) relating to the second signal.

35. A method of estimating one or more parameters of a signal using a dynamically variable integration time comprising:

a step for determining, using a first integration time, a first correlation function representing the correlation between a signal and one or more shifted versions of an identification code;

a step for attempting to estimate, responsive to the first correlation function, one or more parameter(s) relating to the signal; and

if the attempt is unsuccessful:

a step for determining, using a second integration time which may differ from the first integration time, a second correlation function representing the correlation between the signal and one or more shifted versions of the identification code; and

a step for attempting to estimate, responsive to the second correlation function, the one or more parameter(s) relating to the signal.

36. A method of estimating one or more parameter(s) relating to signal using a dynamically variable integration time comprising:

a step for determining, using a first integration time, a first correlation function representing the correlation between a signal and an identification code;

a step for determining, responsive to the first correlation function, a second integration time which may differ from the first integration time;

a step for determining, using the second integration time, a second correlation function representing the correlation between the signal and the identification code; and

a step for attempting to estimating, responsive to the second correlation function, one or more parameter(s) relating to the signal.

37. The methods of any of claims 8, 16, 25, 34, 35, or 36, tangibly embodied as a series of instructions stored in a processor readable medium.

38. The methods of any of claims 8, 16, 25, 34, 35, or 36, tangibly embodied as a series of instructions stored on a server.

39. The methods of any of claims 8, 16, 25, 34, 35, or 36 tangibly embodied as synthesized logic.